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(71) **Applicants (for all designated States except US):** **PIRELLI & C. S.p.A.** [IT/IT]; Via Gaetano Negri, 10, I-20123 Milano (IT). **TELECOM ITALIA S.P.A.** [IT/IT]; Piazza degli Affari, 2, I-20121 Milano (IT).

(72) **Inventors; and**

(75) **Inventors/Applicants (for US only):** **BUSCAGLIA, Flavio** [IT/IT]; Telecom Italia Lab S.p.A., Via G. Reiss Romoli, 274, I-10148 Torino (IT). **BERNASCONI, Valerio** [IT/IT]; Telecom Italia Lab S.p.A., Via Reiss Romoli, 274, I-10148 Torino (IT).

(74) **Agents:** **BATTIPEDE, Francesco** et al.; Pirelli S.p.A., Viale Sarca, 222, I-20126 Milano (IT).

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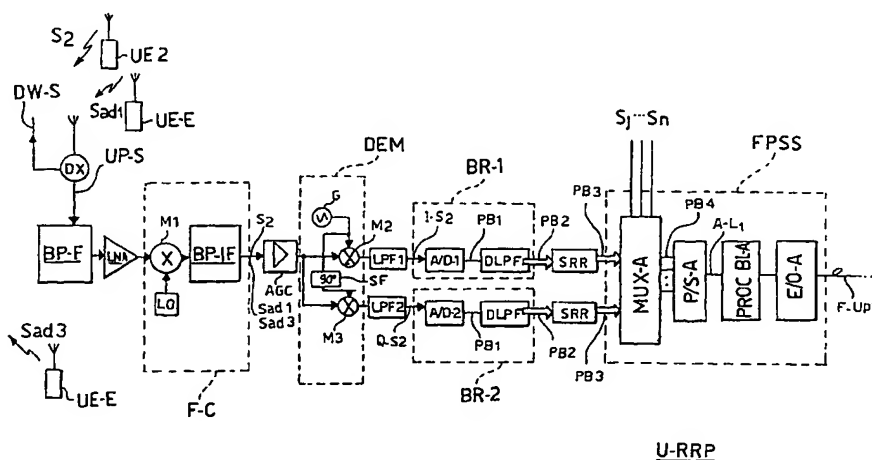
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- (54) Title:** RADIO BASE STATION RECEIVER HAVING DIGITAL FILTERING AND REDUCED SAMPLING FREQUENCY



- (57) **Abstract:** Station (U-RRP) for processing a first signal which can be generated by a mobile terminal and belongs to a plurality of signals for mobile radio communications networks, said station including: an input able to receive from an antenna (A) the first signal associated with a first band and at least one adjacent signal of said plurality associated with a second band adjacent to that of the first signal; a processing stage (BP-IP, DEM, AD-1) for generating from the first digital signal at a first sampling frequency, this first digital signal including a useful spectral content of the first signal and an interfering spectral content associated with said adjacent signal; a digital filter (DLPF) for processing the first digital signal, attenuating the interfering spectral content, and for providing a filtered digital signal including at least part of said useful spectral content, sampled at a second sampling frequency less than the first sampling frequency and an electro-optical converter (E/O-A) for generating from said filtered digital signal electromagnetic radiation to be transmitted on a waveguide (F-up1).

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